STATE OF MAINE

DEPARTMENT OF MARINE RESOURCES

IN THE MATTER OF THE APPLICATION OF JESSE S. LEACH FOR AN AQUACULTURE LEASE IN THE UPPER BAGADUCE RIVER, BROOKSVILLE, PENOBSCOT, AND SEDGWICK, HANCOCK COUNTY, MAINE	)))))	**FINDING OF FACT, CONCLUSIONS OF LAW, AND DECISION**

On November 4, 1998, Jesse S. Leach, of Penobscot, Maine, applied for an aquaculture lease, comprised of three tracts, totaling 35.75 acres of coastal waters of the State of Maine in the towns of Brooksville, Penobscot, and Sedgwick, Hancock County, Maine. The applicant requested the lease for a term of 10 years for the purpose of cultivating American oysters, Crassostrea virginica, European oysters, Ostrea edulis, soft-shell clams, Mya arenaria, and surf clams, Spisula solidissima.

Approval of aquaculture leases is governed by 12 M.R.S.A. §6072. This statute provides that a lease may be granted by the Commissioner of the Department of Marine Resources (DMR) if it is determined that the project will not unreasonably interfere with the ingress and egress of riparian owners, navigation, fishing or other uses of the area; the ability of the site and surrounding areas to support ecologically significant flora and fauna; the use or enjoyment within 1,000 feet of municipally, state, or federally owned beaches, parks, or docking facilities. The Commissioner must also determine that the applicant has demonstrated that there is an available source of organisms to be cultured for the lease site.

A public hearing on this application was held September 28, 1999 at 7:00 p.m. in Brooksville.

Intervenor status was granted to local state Representative Paul Volenik and the Town of Sedgwick. Intervenor status was also granted to the following individuals who were either riparians or local residents and opposed to the project: Peter R. Horton, Thomas L. Poole, Pamela A. Mackiernan, Richard S. Nutt, Middleton K. McGoodwin, George F. Drury,

Christopher Noble, Louise Bourne, Philip Steele, John R. Davies, Mary Jo Davies, Kimball R. McMullin, Tod Cheney, Jonathan and Sarah E. Bourne, Gertrude W. Simmons, Robert W. Knight, Jim Paulas, Thomas Pascal, Frank and Virginia Snow, and Jacqueline Gott. The individual intervenors consolidated their presentations and were represented by counsel at the hearing. All intervenors provided written and/or oral testimony.

The applicant, Jesse S. Leach, of Penobscot, Maine, presented testimony and fielded numerous questions on the application. A volunteer aquaculture consultant, Mr. Sam Chapman of Waldoboro, Maine, accompanied him. Mr. Chapman's background includes work with the USDA Time and Tide Resource Conservation and Development Program, the University of Maine, various public schools and a private engineering firm specializing in seawater systems. Exhibits 1 and 2.

The applicant testified about the personal experiences that led him to apply for an aquaculture lease. He explained that he has been a lobster fisherman for many years. He has held or holds licenses to fish for urchins, elvers, scallops, and shellfish. He also holds a Maine commercial fishing and crew license for other fisheries; for example, such a license would be used for groundfish or shrimp. He also stated that he has operated a freshwater trout pond and is an organic farmer. After an injury that prohibited him from fishing for lobster, he enrolled in a federally funded fisheries retraining program. This program included training and education to learn the business of shellfish aquaculture. The applicant testified that he originally sought a large lease consisting of 35.75 acres. He stated that he believed other persons would join him in his aquaculture activities. In his opinion, he would have saved those persons the time and process of applying for a lease, which he considers over-burdensome and time-consuming.

The applicant testified that, after learning of the intervenors' objections to his application, he decided to reduce the acreage requested to two adjacent tracts. The applicant testified that these two lease tracts would be located within the proposed 21.646 acre Tract 2, as described in the application. The area would be reduced to approximately three (3) acres that would be

used for both surface and bottom aquaculture, and approximately two (2) adjacent acres that would be used only for bottom aquaculture with containers on the bottom. The applicant testified that the location of the surface/bottom tract would begin 200' easterly from the southwestern corner of the proposed 21.646 acres Tract 2, following the described southern boundary, for 600' and would occupy a rectangular area of 600' x 200'. The adjacent bottom tract would occupy a rectangular area of 600' by 100' off the north side of the surface/bottom tract. The total overall dimensions would be 600' by 300'.

The applicant testified that he no longer sought permission to raise nori. He explained that the seed shellfish listed would be obtained from hatchery sources only, none from the wild. He stated that hatchery shellfish stock generally have a 90% survival rate to adulthood compared to nearly 100% mortality rate in wild soft-shell clam seed. The applicant stated that he was not seeking permission to bottom plant or broadcast shellfish.

The applicant testified that surface trays consisting of industry standard ADPI mesh bags, 40" long by 18" wide by 3" deep, tied end to end in rows called strings, would be used to raise seed. As the seed shellfish grew, pipe insulation used for floatation placed inside a bag along the length of each side, would be removed from one side to allow the ADPI bag to hang vertically in the water. The visible profile on the water's surface would then change from 40" by 18" wide to 40" by 3" wide. Individual strings would have a maximum length on the surface of 50'. The maximum surface size of an array or group of parallel strings would be 50 square feet. All strings would be arranged parallel to the water flow or primary current. There would be a minimum of 20' of separation between any two 50ft² array of strings.

According to the application, two 10' by 30' by 15" high floating upweller rafts would be used to raise spat (microscopic planktonic shellfish). An upweller raft would consist of up to three 10' by 10', 15" high individual units constructed of a cedar frame and deck with Styrofoam cores installed for floatation. Each $10ft^2$ upweller would contain 10 internal containers (also referred to as silos) that allow water to flow through the spat contained inside each silo. When

large enough, small seed from the upweller would be transferred to the horizontal surface trays or ADPI bags. The applicant testified that he would use the natural tidal flow to push water through the silos instead of a motorized pump system. The applicant testified that he would deploy a maximum of one 10' by 30' upweller (consisting of three 10ft^{2}units) on the west end and one on the east end of the surface/bottom tract. The applicant described the upweller rafts as comparable to large lobster cars that are used for storage of lobsters in the ocean.

As that seed grows larger, the shellfish would be split into vertically hung surface trays or ADPI bags. As seed shellfish reach adulthood, the size of a quarter to half dollar, they would be transferred to the bottom grow-out cages to grow to market-size or 3" and larger. The applicant explained that the bottom structures containing the growing and adult shellfish would consist of cages similar to a lobster trap with the dimensions of up to 4' long by 2' wide by 2' deep. According to the application, the ADPI bags would also be used for containment on the bottom, however the bottom cages would be the preferred container as they could be built for placement above the depth of the mud to prevent suffocation in the shellfish. The bottom cages would be used for grow-out of mature shellfish when they become too large for continued growth in the vertically oriented surface trays. The bottom only tract would be used for placement of shellfish for over-wintering. Placement on the bottom in the deepest portion of the channel would be used to protect the shellfish from freezing. The cages may be stacked, although not very high, in a manner that would not encroach upon the surface waters of the shallower areas and to take advantage of the relatively warmer bottom water during the winter within the bottom tract.

Moorings for the strings, upwellers, and bottom cages would consist of rope with cement blocks placed in the mud bottom. The ends of the surface strings would be marked with common lobster toggles or lobster buoys painted black. The cages would be placed on the bottom by scuba divers. During the winter, all surface structures would be removed. The over-wintering bottom cages would be anchored. A single marker buoy on the surface would mark the winter cages. The applicant testified that no predator nets, would be used.

The applicant testified the area was a good area to raise shellfish due to the natural availability of plankton for feed, protection from wave action such as surges from open ocean waters, and the absence of large vessels navigating the area. The applicant characterized the small boat traffic as minimal during the warmer months of the year. That traffic includes canoes, kayaks, and motorboats such as for bass fishing.

The applicant stated that he would sell seed shellfish, primarily oysters, at the spat stage and small seed sizes, prior to maturity to other growers or communities. The applicant would also sell or market adult size oysters for eating. He stated that he could raise 2 million oysters if half of the oysters were to be sold as larger seed (the size of a quarter or half dollar) to other growers, with the remainder reared to the 3" market-size. Grow-out from 12mm to 3" could take place within 14 months to as long as three to four years depending on the growing conditions. The applicant stated that his initial plan was to raise 300,000 oysters, to various sizes, per year.

The applicant described activities on the proposed site to include transfer of spat or seed shellfish from the upweller to trays or bottom cages. Fouling organisms, such as algae that grow on the surface trays, would be cleaned by hand. Harvest of the shellfish would be done by hand, primarily using scuba divers to collect shellfish from the bottom cages.

The applicant testified that the use of a power washer described in the application was no longer necessary based on the reduction in size of the proposed lease. Cleaning of trays by hand would be accomplished by hand using a scrub brush, or shellfish would be transferred into clean trays on the site, and any fouled trays or ADPI bags would be cleaned off-site. He also anticipated the need to clear drift eelgrass from the gear. He stated that he intended to push it away on an outgoing tide by hand. Activity on the proposed site would occur primarily during the months of April through November, with occasional dives during the winter, if the area were clear of ice to dive on the bottom cages for harvest or for inspection. All surface gear would be removed during the winter months or from December to March. Husbandry activities were

estimated to require up to two days per week and harvest activities up to one day per week. The applicant testified that he would hire one person to work with him for safety reasons.

The applicant testified that the 100' wide bottom tract would be located in the deepest portion of the river, in the channel, with approximate depths of 30'. The surface/bottom tract adjacent to the south would have depths that range from approximately 15' by 30'. The tidal range of the area is 2' to 3' due to a bridge constriction.

The applicant testified that no surface structures would be placed within the bottom tract that follows the channel. Only mandatory corner markers would mark the bottom tract. The applicant stated that due to the presence of eelgrass in the shallower portions of the area requested, only 50% of the area requested would be occupied by structures. He also stated that within the surface/bottom tract all strings would be oriented parallel to the current and in arrays no greater than 50 ft^2 with a minimum of 20' of spacing between any 50 ft^2 array to allow passage between them. In his opinion, the area of the channel, occupied by only the bottom tract, would be left open.

The applicant testified that he had several options to gain access to the proposed lease with a boat and trailer. These included the shorefront properties of Dale and Patricia True of Brooksville, the public road/bridge access off Route 175, commonly referred to as the falls, the shorefront property of Bing Gross, or the public facilities located in Penobscot.

A biologist, employed by the Department, testified and answered questions on the statutorily required site review conducted April 19, 1999. The Department report included the following: a video survey of the flora, fauna, and bottom composition, temperature, depths, proximity measurements of the proposed site to shore and to other leases, plus documentation of local fisheries and observations. Exhibit 3.

The biologist testified that, during the dive on the reduced portion of Tract 2, he observed mud shrimp and horseshoe crabs in abundance, plus a few scallops, crabs, whelks, and nudibranchs. No lobster or clams were observed. The biologist explained that, in the deep

water, eelgrass was rare except for drift broken fronds. He stated that in the shallower portions, where eelgrass was found, he estimated 2% to 3% eel grass coverage in patches. He explained that on the date of his dive, April 19, 1999, he did not anticipate summer-time growth of eelgrass. However, he explained that since the stocks would be present that he could determine where beds would be located year round and the extent of coverage estimated.

He explained that, in deeper depths, eelgrass would not grow because it is beyond the necessary light penetration level. In his opinion, the reduced bottom portion of Tract 2 requested is too deep and too rocky to support eelgrass.

The biologist testified that, during the dive, he observed the substrate to be a soft-mud bottom to depths of 18", except in the deep portion that was scoured by the water current and consisted of firmer rocky or sandy sediments. In the reduced requested portion of Tract 2, the bottom slopes toward the channel from 15' down to 37'. The tidal range in the upper Bagaduce River is two to three feet due to a bridge constriction where Route 176 crosses the upper Bagaduce River. The temperature range from the surface to bottom on April 19, 1999 was 6.7°C to 2.8°C.

According to the biologist's report, the distance between the proposed 21.646 acre, Tract 2, southwest corner, and the high water mark due west on the North Brooksville shore was approximately 259'. The point of beginning from a ledge on shore due south to the original southwest corner, and point of beginning, was approximately 30' based on the distances between the point of beginning on the ledge and the southern corner coordinate.

The biologist reported that the area contained no moorings and no aids to navigation within the area. In his opinion, vessels in the area would include canoes, kayaks, and small power vessels in the 12' to 18' range. The area would likely ice over during winter months.

The biologist testified that, according to correspondence with the Department of Inland Fisheries and Wildlife, no conflicts were anticipated with wildlife listed as endangered, or threatened, or with a significant habitat designation such as eagles or ospreys. The DMR

biologist explained, based on his past experience as a wildlife biologist, that cormorants, muskrats, and osprey do not eat shellfish; that seabirds do not tear open bags containing shellfish to feed; and that seals are not shellfish consumers. He explained that seals enjoy sunning themselves and will often haul out on rafts or trays. The biologist stated that, based on the Department's experience at similar shellfish leases, seals and species such as horseshoe crabs, in both high and low numbers, mutually co-exist. He testified that entanglement with this type of gear is not expected. The biologist also referenced Deputy Commissioner Lew Flagg, as director of the Anadromous Fish Division of DMR for 30 years, and his expertise on alewife populations. Concerns were expressed that the "pygmy" alewife population in Walker's Pond off the upper Bagaduce River would be negatively impacted. The biologist testified that, based on the expertise of Mr. Flagg, the proposed activity would not pose any conflicts with the migration of pygmy alewive populations through the area.

The biologist testified that, in his opinion, the location was a good area in which to raise shellfish as there are good sources of planktonic food, particularly that created by the fresh water nutrient flow (run-off) into the Bagaduce River. The resulting natural algae blooms from the fresh water influence create a feed supply for shellfish that far exceeds what is growing there and for the proposed activities. The biologist also explained that the proposed shellfish species, European oysters and surf clams, not currently growing within the proposed lease area, could potentially grow wild in the area. However, he stated that, based on past experience with the European oyster for example, if these shellfish were to spawn and survive, it would likely survive only in pockets and not overpopulate other species in the area.

The opposing intervenors provided written and/or oral testimony on the proposed lease. Most of the concerns were similar. The opposing intervenors indicated the applicant did not possess technical ability or knowledge to succeed in raising shellfish. This lack of understanding, in their opinion, would result in an adverse environmental impact from potential shellfish diseases, encroachment on exiting shellfish populations, and local wildlife. The

intervenors expressed concerns that the proposed activities would have a negative affect on the view from their property, and on their shorefront property values. The proposed lease could have an impact on up to eight docks proposed to be built in the area. One intervenor stated that residential land development has greater economic value and is, therefore, more valuable and should take precedence over aquaculture. Many indicated they did not agree with the law that allows individuals to lease Maine waters, although they were not opposed to aquaculture per se.

The intervenors expressed concerns about noise from the proposed use of a pressure washer for cleaning trays, the number of persons working on the site, and frequency of work on the proposed lease.

The intervenors indicated that wildlife including eagles, seals, migratory fish, horseshoe crabs, and small mammals such as muskrats, would be adversely impacted by the presence of the gear, floating ropes, nets, or noise. Many felt that the applicant's activities would have a negative impact on the local eelgrass population. They also indicated that the applicant's assessment of the degree to which drift eelgrass would accumulate on the gear was underestimated and therefore the time it would take to clear the eelgrass would be much greater than he stated.

The intervenors strongly rejected the applicant's description of the area as a low or lightly trafficked area by small boaters or paddlers, which the applicant stated he had placed in the context of comparing the area to where he fished lobsters in open ocean waters. The intervenors testified to their personal use of the area by canoe, kayak, sail boat, and motorboat, and for recreational fishing, running the rapids under Falls Bridge, duck hunting, water skiing, and swimming. One intervenor indicated canoeing took place year-round in the area. The intervenors characterized the applicant as less than scrupulous in his descriptions of the extent of uses of the area. The intervenors expressed concerns about how the proposed lease area and channel would be marked, particularly for hunters traversing the area at night or for persons swimming or capsizing canoes or kayaks.

Several members of the public testified in opposition to the proposed lease. Two persons expressed opposition to leasing in general although not opposed to aquaculture, just the location of this application. Two persons spoke specifically on behalf of a private camp facility located off the upper Bagaduce River on Walker's Pond. Their concern was for aesthetics and navigation safety while paddling the area in canoes or kayaks. Concern was expressed that the proposed reduced site would pose a navigational hazard during emergency rescues while conducting training in canoes and kayaks in the rapids in the constricted area created by the Falls Bridge. A riparian testified that the visual, noise, and aesthetic impacts from the proposed lease activities would devalue the home she had built with her chainsaw. Several others expressed concerns over aesthetics, wildlife impacts, and recreational boating impacts. A concern was expressed that the proposed lease would negatively impact the area as a nursery ground for fish and would contribute to the collapse of the northeast fisheries.

Six persons from the general public testified in support of the proposed lease. Two fishermen testified that the proposed lease would have a positive impact on commercial fisheries, that shellfish aquaculture in particular would provide long-term benefits for the environment, fisheries habitat and consumers. The executive director of the Maine Aquaculture Association urged support. In his opinion, the applicant represents those persons who have been displaced from other fisheries that have taken the opportunity to be retrained in aquaculture to be able to continue earning their livelihood from the ocean. A Sea Grant Extension agent from the University of Maine testified in support and explained that there is a support network for aquaculture in the form of information and resource persons available to the general public and potential aquaculturists. A schoolteacher testified in support of the project. In his opinion, the proposed venture typifies an example of future careers for children and he felt that the aquaculture proposed would be environmentally friendly, i.e., bivalves are filter feeders that clean the water. He disagreed with a characterization that the upper Bagaduce is a museum that should be preserved and stated that society should consider how natural

resources can be used in an environmentally friendly manner. He gave examples of clamming and the older brick yards in the Bagaduce. He also explained that the Falls Bridge is man-made and that the rapids there are not a natural presence.

A relative of the applicant testified in support of the proposed lease and on behalf of the applicant's character. He stated that the safety concerns about children swimming or capsizing a canoe or kayak were overblown. He pointed out that children's camps usually have designated areas in which to swim and use areas lined off with strings that children have to swim within. In his opinion children in canoes or kayaks should be wearing PFD's in case they capsize anyway. In his opinion, many of the concerns expressed were elitist in nature, as if this was big business, which it is not. The applicant has no guarantee that it is going to succeed; however if the applicant does succeed, it presents an alternative opportunity for those in the future.

Findings of Fact

The proposed lease has the overall dimensions of 300' by 600'. This area is divided into two adjacent tracts, a suspended with bottom (containment) culture tract that would be 200' by 600', and a bottom (containment) tract that would be 100' by 600'. The acreage of the surface portion of the site, based on the dimensions, would be 2.75 acres. The bottom only tract would be 1.38 acres, for a total acreage of 4.03 acres.

The bottom only tract is located within the channel area and has depths of approximately 30' to 37'. The surface tract, adjacent south of the bottom only tract, has approximate depths of 15' by 30'. The tidal range is only 2' to 3', with a comparatively small intertidal zone exposed at low tide within the upper Bagaduce River. There are no moorings within the proposed lease or vicinity.

According to the evidence and Department's biologist, the western end of the proposed lease is nearest to shore. There would be approximately 459' (259' plus 200') between the southwest corner to the high water mark due west; at least 200' (30' plus 200') between the

ledge due southwest, used as the point of beginning, to the southwest corner; approximately 254' (54' plus 200') between the northwest corner and the shore due west to the high water mark; and over 350' (299' by 200') between the northwest corner and the high water mark due north.

According to the riparian intervenors, small pleasure boats such as canoes, kayaks, motorboats, etc. are deployed from their properties on a regular basis, primarily during the warmer months. No large vessels were described as being used within the area, likely due to the restricted access under a bridge. Passage in the vicinity was described by riparians to include active use of the deeper channel area and the shallow waters near the shoreline.

Testimony and evidence provided by the applicant indicated that access to the proposed lease would be gained from either a public facility, such as in the town of Penobscot, or from shorefront property owners who have provided permission to the applicant to use their property for that purpose.

Concerns were expressed regarding the applicant's responsibility to recover any debris or errant gear from the proposed lease from riparian or surrounding shorefront property. The applicant expressed willingness to accommodate riparian concerns. The applicant requested to reduce the size of the proposed lease to a resulting surface area of 2.75 acres. The applicant would not use private shorefront property for access to the proposed site unless authorized to do so. Otherwise the applicant would use public access. The nearest points to shore range from approximately 230' to 459'. These distances indicate an availability of room to access the water primarily by small, shallow draft pleasure craft that do not require large distances to gain access to the shore. Based on the testimony and evidence, the willingness of the applicant to accommodate riparians' concerns such that a condition be imposed that there would be no unauthorized riparian land access except in extreme emergencies, and the agreement to clean up anything that might blow on shore from the proposed lease, I find that the lease will not unreasonably interfere with the ingress and egress of the riparian owners.

According to the evidence, the nearest distance to shore of the proposed lease would be approximately 200' between the southwest corner and the ledge on shore due southwest. There would be a maximum of two 10' by 30' raft systems comprised of up to three 10 ft^2 upweller rafts, with 50 ft^2 parallel surface arrays of strings of trays, with a minimum of 20' spacing between arrays. According to the applicant, only 50% of the requested area could be used, due to potential presence of eelgrass. Considering the upwellers, mooring space, 20 ft separations, and 50% usable area, the maximum number of 50 ft^2 arrays possible would be six. The applicant testified that the bottom cages would not interfere with navigation. Stacking of cages would be limited so as not to interfere with boats. The applicant also testified that he would mark the site by using unobtrusive black buoys or as required by the regulating agencies. No floating ropes would be used. Only the ropes necessary for the strings and moorings without excess would be used. There would be at least 20' separation between the arrays. This would allow passage through the site.

According to the Department's biologist, the deep-water channel is within the bottom only tract. The adjacent surface gear would be moored within the surface only tract with the exception of mandatory boundary markers for the bottom tract. According to the biologist, the area is likely used by pleasure crafts in the 12' to 18' range. In his opinion, there would be adequate room in which to navigate the area for the size and type of vessels described.

According to testimony by riparian intervenors, riparians, and general public, boat use consisted of year-round daily use including the time of ice-coverage in the winter, seasonal bursts of recreational fishing activity which may reach as many as 15 vessels in the area, canoe trippers traveling the area, hunters traveling the area at night to shoot ducks at day break, occasional water ski-type sports, and white water training at the bridge area. Testimony by one riparian estimated a conservative number of six boats in the area daily, primarily during the warmer months.

The surface area to be used would be limited to 50% of the surface tract with the dimension of 200' by 600' with the previously described limitations on the surface structures. The surface tract does not cover the deeper channel portion of the area. Unobtrusive black buoys would be used to mark gear. No loose ropes, buoys, or strings would be placed in a manner that would clutter the navigable portions of the lease. Based on the evidence and testimony, given that there is at least 200' of clearance from the boundary and the high water mark providing adequate room for the described types of small pleasure craft to pass, and that a minimum of 20' of separation between the 50 ft^2 arrays for passage would be established, I find that the lease will not unreasonably interfere with navigation in the area.

The riparian intervenors, additional riparians, and others from the general public characterized the vicinity of the upper Bagaduce River as having extensive seasonal, commercial, and recreational fish, hunting, and guiding activities. Persons engaged in these activities would primarily use pleasure craft to navigate the area to fish for striped bass or mackerel, shoot ducks, or guide persons or campers through the area. This contrasted with the applicant's description of the area having limited, if any, active commercial or recrational fisheries or other uses. Many commentors were not opposed to aquaculture per se, however they did not want it locally and particularly not on the original scale proposed.

The uses described by the opponents ranged from the high small boat use of the area that contrasted with the descriptions of a tranquil area that is rarely disturbed or disrupted such that wildlife was frequently observed. Opponents raised concerns about noise, particularly if the applicant were allowed to use a high presser washer on the proposed lease. They feared that any noise would impact wildlife or their own uses of the area. This was in contrast to the described use of outboard engines, chainsaw noise and gunshots for duck or wildlife hunting. The level of hunting for ducks or wildlife, and fishing contrasted to the concerns that the wildlife of the area needed protection from aquaculture. Swimming across the river on a daily or routine basis without difficulty contrasted to descriptions of a river with rapids and white water

conditions beginning at the bridge area that were so strong that the distance of those conditions into the Upper Bagaduce river relative to the proposed lease could not be estimated.

The opponents' concerns contrasted with the supporters' testimony on the use of the area for an aquaculture operation. The proposed activities were stated to be important as an environmentally green commercial activity, in that bivalves feed on algae in the water, and therefore would help clean the water. The rearing of bivalves in an area where other bivalves live is not considered harmful to other organisms in that area, presuming all laws and regulations are met regarding the movement of bivalves. Supporters testified that aquaculture was an alternative occupation for displaced fishermen that should be supported, and if this were another fishery the applicant would not have to go through public scrutiny to work in the same area as a commercial fisherman or digger for example. Supporters stated that aquaculture was a fishery that gives back to the ocean instead of taking from it. The laws of the State of Maine allow for persons to apply for leases in the marine waters of the State and the supporters expressed views on why, in their opinions, the reduced lease should be approved.

According to the Department's Water Quality Program and the Community Resource Development Watershed Program, the towns of Penobscot, Sedgwick, and Brooksville do not have Municipal Shellfish Conservation Programs. These towns, therefore, do not have pollution abatement plans under this program. The area of the proposed lease in the upper Bagaduce River was declared "open" to the harvest of shellfish August 27, 1999. There are no existing aquaculture leases within the upper Bagaduce River.

The significantly reduced size of the proposed lease and subsequent reduction in the quantity of structures and surface area that they would occupy represents a substantially smaller operation than originally proposed. Based on the testimony and evidence, given the variety of contrasting descriptions of the area uses and degree of those uses, based on the credible estimate by a riparian, that the area has a conservative amount of small boat traffic, of 6 per day during the summer, and the Department's biologist's opinion based on his knowledge

of aquaculture interactions at Maine leases and his wildlife background, that the proposed lease would be compatible with the area wildlife, plus that the proposed lease is not located within the intertidal area now classified open for the harvest of shellfish by licensed diggers, I find that the proposed lease will not unreasonably interfere with fishing or other uses of the area.

According to the evidence and testimony, the upper Bagaduce River had been closed to the harvest of shellfish from bacterial pollution (due to human sources) until August 27, 1999. Concerns were expressed that the rearing of shellfish would create pollution causing disease in other shellfish. Testimony by an educator clarified that shellfish are bivalves that filter the water in which they live. Shellfish eat and, therefore, remove plankton in the water including bacteria that result in a cleaning affect of the water, removing pollutants.

Concerns were expressed about the spread of shellfish diseases. The applicant must comply with all regulations regarding the movement, testing, placement, and sale of shellfish. The Department has extensive regulations and statutes intended to control spread of shellfish diseases.

Concerns were expressed that settlement of spawn from the shellfish proposed to be raised would occupy space and use nutrients and over take the existing shellfish or local marine organisms. The Department's biologist testified that there was ample food supply for both the local shellfish population and the proposed shellfish culture. He also explained that if the American or European oysters or surf clams were to establish themselves naturally, they would likely be found in patches and would not over-populate the area or other organisms.

Concerns were expressed about the amount of noise and its impact on wildlife that would occur from the proposed activities. The applicant testified that he would not use a powered pressure washer on the site, there would be no motors used to power the upwellers, and the only motor used would be the one on his boat.

No bottom planting of shellfish was requested. According to the applicant's testimony, no bottom cages would be placed on eelgrass beds. All seed shellfish would come from Maine

sources, using broodstock indigenous to Maine waters. Based on the evidence and testimony, I find that the proposed activities will not unreasonably interfere with the ability of the site and surrounding areas to support existing significant flora and fauna.

Testimony and evidence provided by the applicant indicate that seed stock will come from hatcheries in Maine. No wild seed or shellfish stock would be used to cultivate American oysters, European oysters, soft-shell clams, or surf clams on the proposed lease. Given this information, I find that there is an available source of American oysters, European oysters, soft-shell clams, and surf clams to be cultivated on the proposed lease.

According to the evidence, including maps, charts, and testimony, the proposed lease is not located near any public dock, beach, or park facility. The nearest public landing is located in Penobscot on the Bagaduce River. Concerns were expressed that the proposed lease activities would interfere with the popular white water boating activity that takes place at the Fall Bridge or the Route 176 bridge constriction, or prohibit swimming at the bridge and in the upper Bagaduce River. Given the greatly reduced surface area and structures on the proposed lease site, and that the estimated distance between the bridge and proposed lease is at least 1,000' or greater distance, I find that the proposed lease activities will not unreasonably interfere with public use or enjoyment and that the site is not located within 1,000' of any municipally, state, or federally owned beaches, parks, or docking facilities.

Conclusions of Law

Based on the above findings, I conclude that:

1. The aquaculture activities proposed for this site will not unreasonably interfere with the ingress and egress of any riparian owner;

2. The aquaculture activities proposed for this site will not unreasonably interfere with navigation;

3. The aquaculture lease activities proposed for this site will not unreasonably interfere with fishing or other uses of the area, taking into consideration the number and density of aquaculture leases in the area;

4. The aquaculture lease activities proposed for this site will not unreasonably interfere with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna;

5. The applicant has demonstrated that there is an available source of American oysters, European oysters, soft-shell clams, and surf clams to be cultured for the lease site; and

6. The aquaculture lease activities proposed for this site will not unreasonably interfere with public use or enjoyment within 1,000 feet of municipally, state or federally owned beaches, parks, or docking facilities.

The evidence in the record supports a finding that the proposed aquaculture activities meet the requirements for the granting of an aquaculture lease set forth in 12 M.R.S.A. §6072(7-A).

Decision

Based on the foregoing, the Commissioner grants the requested lease of 4.03 acres to the applicant for a period of ten (10) years from the date of this decision, for the purposes of cultivating American oysters, Crassostrea virginica, European oysters, Ostrea edulis, soft-shell clams, Mya arenaria, and surf clams, Spisula solidissima, using suspended and bottom containment culture techniques as described in the application and the hearing record. The applicant shall pay the State of Maine rent in the amount of $50 per acre per year. The applicant shall post a bond or establish an escrow account in the amount of $5,000, conditioned upon its performance of the obligations contained in the aquaculture lease documents and all applicable statutes and regulations.

Conditions to be Imposed on Lease

The Commissioner may establish conditions that govern the use of the lease area and impose limitations on aquaculture activities. Conditions are designed to encourage the greatest multiple, compatible uses of the lease area, while preserving the exclusive rights of the lessee to the extent necessary to carry out the purposes of the aquaculture law.

The following conditions are placed on this lease:

1. recreational boating and recreational fishing, otherwise permitted by law, is to be allowed in the open areas of the lease;

2. the lease area shall be marked in accordance with U.S. Coast Guard and Department of Marine Resources requirements with the exception that only the corner buoys be deployed on the bottom tract for purposes of not impeding navigation; and

2. there be no unauthorized riparian land access, except in extreme emergencies, and to clean up any debris that may have blown on shore from the lease site.

The Commissioner may commence revocation procedures if he determines that substantial aquaculture has not been conducted within the preceding year or, that the lease activities are substantially injurious to marine organisms. If any of the conditions or requirements imposed in this decision, in the lease, or in the law are not being observed, the Commissioner may revoke the aquaculture lease.

Dated: _____

_____
George D. Lapointe (Commissioner)
Department of Marine Resources